

**REMARKS**

Claims 1-16 stand rejected under 35 U.S.C. 101.

Claims 1 and 6-8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson USP 5793871 in view of Abbott 200110028758. Claims 2-5 and 9-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson in view of Abbott and at least one additional reference.

The Examiner indicates that claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 101 and to include all of the limitations of the base claim and to include paragraph [0027] of Applicants' disclosure. Also indicated to be allowable is Claim 1 "if re-written consistent with claim 16 as suggested i.e., combining claim 16, OTDL, and par. 0027 of Applicants' disclosure to base claim 1, fixing 101 problem." The rejection of claims 1-8 under 35 U.S.C. 101 and claims 1-16 under 35 U.S.C. 103(a) are overcome by the amendments to the claims and are otherwise traversed. The rejection of claims 9-16 under 35 U.S.C. 101 is traversed.

Addressing the rejection of claims 9-16 under 35 USC 101, while the Examiner asserts that "The system claim(s) fail to disclose any hardware element in the body of the claims", even a cursory review of base claim 9 as it appeared prior to the present Amendment reveals a plurality of hardware elements including first and second optical tapped delay lines and first and second phase modulators as follows:

9. A system for secure transmission of an information-containing optical signal, comprising:
  - at least **a first optical tapped delay line** configured to enable division of the optical signal into a first plurality of spectral sub-bands,
  - at least **a first phase modulator** configured to enable modification of each of the first plurality of spectral sub-bands to encrypt the information contained in the optical signal, the first optical tapped delay line being configured to enable combining the modified first plurality of spectral sub-bands into a combined optical signal,
  - at least **a second optical tapped delay line** configured to enable division of the combined optical signal into a second plurality of spectral sub-bands,
  - at least **a second phase modulator** configured to enable modification of each of the second plurality of spectral sub-bands to decrypt the information previously

encrypted, the second optical tapped delay line being configured to enable combining the modified second plurality of spectral sub-bands into a combined optical signal.

Claim 9 prior to entry of the present Amendment, emphasis added.

Claim 9 as presently amended continues to recite the emphasized hardware elements. Accordingly, withdrawal of the rejection of base claim 9 and dependent claims 10-16 under 35 USC 101 is solicited.

The rejection of claim 1-8 under 35 U.S.C. 101 is overcome by the present amendment and is otherwise traversed. Claim 1 recites "A method for secure transmission of an information-containing optical signal in a reflective/transmissive architecture" including a combination of steps, at least one of which uses an optical tapped delay line to divide an optical signal into a first plurality of spectral sub-bands. The claim certainly does not fall within the purely mental steps example of non-statutory subject matter. To the contrary, the preamble of the claim recites that the method is for secure transmission of "an information containing optical signal" and that the method is performed "in a reflective/transmissive architecture." Thus, the claim recites transforming subject matter (i.e., an optical signal) and an apparatus that accomplishes the steps, i.e., a reflective/transmissive architecture. Claim 9 as amended further emphasizes statutory subject matter by reciting that an optical tapped delay line divides the optical signal into a first plurality of spectral sub-bands. Because claim 1 both recites transforming subject matter and is tied to apparatus that accomplishes the recited steps, withdrawal of the rejection under 35 U.S.C. 101 of claim 1 and claims 2-8 depending therefrom is solicited.

For the sole purpose of expediting issuance, claims 1 and 9 are amended to address the prior art rejections under 35 U.S.C. 103(a) by incorporating subject matter indicated by the Examiner to be allowable. Thus, in addition to reciting an optical tapped delay line, claim 1 is amended to incorporate the limitations of canceled claim 16 and those defined by the formula appearing at paragraph [0027] of the disclosure. Similarly, base claim 9 is amended to incorporate the limitations of allowable claim 16 and the formula of paragraph [0027]. The amendments are made without disclaimer, waiver of or prejudice to any rights to pursue claims of the scope canceled


from the present application or of any scope and coverage supported by the present disclosure in a continuing application.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **509622001100**.

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Respectfully submitted,

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